APPENDIX C – MITIGATION MONITORING PROGRAM

The State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the Pacific Gas and Electric Company (PG&E) L-021A Napa River Pipeline Crossing Replacement Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementing mitigation measures (MMs) for the Project to comply with Public Resources Code § 21081.6, subdivision (a) and State CEQA Guidelines §§ 15074, subdivision (d), and 15097.

The Project would authorize PG&E to replace three existing 8-inch-diameter pipelines (L-021A, L-021 A-1, and L-021A-2) with a new 26-inch-diameter pipeline under the Napa River during Phase 1. During Phase 2, PG&E would remove the existing pipelines under the Napa River (CSLC lease PRC 5438) and decommission in place the pipeline in the adjacent upland areas (outside of CSLC jurisdiction). All Project-related activities would be in the city of Napa (west side of Napa River) and an unincorporated area of Napa County, California (east side of Napa River).

1.1 PURPOSE

Potentially significant environmental impacts from the Project must be mitigated to the maximum extent feasible. The purpose of an MMP is to confirm compliance with and implementation of MMs; this MMP will be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

1.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing the MMP. PG&E is responsible for successfully implementing and complying with the MMs identified in this MMP. This includes all field personnel working for PG&E.

1.3 MONITORING

CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions (Napa County). The CSLC or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. An environmental monitor must be onsite during all Project activities with the potential to create significant environmental impacts or impacts for which mitigation is required to confirm implementation and success of MMs.

Along with CSLC staff, the environmental monitor(s) are responsible for:

- Confirming the Applicant has completed all necessary agency reviews and received all necessary approvals to perform the Project
- Coordinating with the Applicant to integrate the MM procedures during Project implementation
- Confirming that the MMP is followed

If the Applicant or their contractors requested changes from the procedures in this MMP, the environmental monitor will immediately relay those requests to CSLC staff or its designee and will not allow the requested changes until CSLC staff or its designee approve them.

Workforce Personnel. Implementing the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. To facilitate successful implementation, relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. CSLC staff or its designated environmental monitor will develop a monitoring process to track all procedures required for each MM and will confirm that the timing specified for the procedures is followed. The environmental monitor shall note any noncompliance or discrepancies and take appropriate action to resolve them. Once the Project is complete, copies of all logs will be submitted to CSLC staff.

Public Access to Records. Records and reports are public and will be provided upon request.

1.4 MITIGATION MONITORING PLAN

The MMP contains MMs reducing or avoiding potentially significant impacts to Aesthetics; Air Quality; Biological Resources; Cultural Resources; Cultural Resources – Tribal; Geology, Soils, and Paleontological Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Recreation; and Transportation. Project activities were found to have less

than significant or no impacts to all other environmental resource areas; therefore, they are not included. The MMP includes the following information:

- **Potential Impact:** Impacts of the Project on the resource
- **Mitigation Measure:** Full MM(s) text
- **Monitoring/Reporting Action**: Action to be taken by the environmental monitor or Lead Agency
- **Effectiveness Criteria**: How the agency can know if the MM is effective
- **Responsible Party**: Entity responsible to comply with the MM
- **Timing:** Before, during, or after Phase 1 construction if it's related to an MM that deals with impacts from the equipment disturbance etc.

1.4.1 AESTHETICS

Potential Impact: Aesthetics – Potential impacts caused by Project lighting

MM AES-1: Glare Minimization. Project lighting shall be as low in intensity as possible to meet Project needs and safety requirements, be focused downward onto work areas, and equipped with shielding to minimize glare and spillover into adjacent areas.

Location: All Project areas
Monitoring/Reporting Action: Observe nighttime lighting for compliance
Effectiveness Criteria: Lighting glare minimized
Responsible Party: PG&E and contractors
Timing: During Phases 1 and 2 nighttime work

1.4.2 AIR QUALITY

Potential Impact: Air Quality – Impacts on localized dust levels

MM AQ-1: Fugitive Dust Control Measures. PG&E shall implement the following Bay Area Air Quality Management District (BAAQMD) best management practices for construction-related fugitive dust:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 miles per hour.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Publicly visible signs shall be posted with the telephone number and person to contact at PG&E regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have a maximum of 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinated native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.

PG&E shall also implement the following:

- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 14 calendar days.
- Stockpiled soil shall be covered and secured at the end of each workday.
- Unpaved roads providing access to the site located 100 feet or further from a paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, gravel, or other material, as approved by the property owner.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Reducing increases in localized dust levels
Responsible Party: Applicant and contractors
Timing: During Phase 1 and Phase 2

Potential Impact: Air Quality – Impacts on localized exhaust levels

MM AQ-2: Bay Area Air Quality Management District Equipment Emissions Reduction Measures. The following construction mitigation measures recommended by the Bay Area Air Quality Management District shall implement by the Project contractor when applicable and feasible:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations).
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Minimize idling time of diesel-powered construction equipment to two minutes.
- Off-road equipment (more than 50 horsepower) to be used (i.e., owned, leased, and subcontractor vehicles) shall use the latest model engines, engine retrofit technology, after-treatment products, add-on devices such as particulate filters to the extent such equipment is available.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Reducing increases in localized exhaust levels
Responsible Party: Applicant and contractors
Timing: During Phase 1 and Phase 2

1.4.3 BIOLOGICAL RESOURCES

Potential Impact: Biological Resources – Impacts on Swainson's hawk nesting

MM BIO-1: Swainson's Hawk Nesting Season Avoidance or Pre-Construction Surveys. In accordance with the Swainson's Hawk Technical Advisory Committee Recommended Timing and Methodology for Swainson's Hawk

Nesting Surveys in California's Central Valley, Project activities occurring between March 1 and August 15 shall require surveys conducted by a qualified raptor biologist, approved by CSLC staff, for active Swainson's hawk nests within a 0.5-mile radius of the Project area. Pre-construction surveys shall be completed for the two survey periods immediately prior to the start of construction, with the final survey occurring within 15 days prior to any construction disturbance. A pre-construction survey report shall be prepared and submitted to CDFW and CSLC within one week of completed pre-construction surveys, that outlines the surveys conducted, nest locations identified, and recommend nest protection buffers for CDFW approval. If active Swainson's hawk nests are identified near the Project area, then ~~based on nest protection buffers outlined in PG&E's Nesting Bird Management Plan (NBMP)~~ the following shall be required:

- Apply a ~~CDFW-approved~~ nest protection buffer~~, with a minimum distance~~ of ~~0.25~~ 0.5 mile<u>s</u> from an active nest. Postpone Project activities within the approved nest protection buffer until after the young have fledged and are no longer dependent on the nest tree. The minimum nest protection buffer may be reduced in coordination with CDFW if existing site conditions and disturbance levels indicate that a reduced buffer would be effective.
- If it is not possible to postpone Project activities within the nest protection buffer, construction activities may only proceed with both CDFW approval and nest monitoring by a qualified raptor biologist. If the monitoring biologist observes signs of distress, then they shall stop construction work and coordinate with CDFW to establish additional protection measures to ensure avoidance of nest abandonment prior to the re-start of Project activities.

Location: Terrestrial and aquatic Project areas
Monitoring/Reporting Action: Submit pre-construction survey report to CSLC and CDFW prior to vegetation removal or ground disturbance, if a reduction in nest protection buffer is necessary, submit proposed buffers to CDFW for review if needed, submit request to CDFW if needed, and observation reports.
Effectiveness Criteria: Compliance with buffers, nest monitoring if needed
Responsible Party: PG&E and contractors
Timing: Before and during Phases 1 and 2 Project activities

Potential Impact: Biological Resources – Impacts to nesting birds

MM BIO-2: Nesting Bird Season Avoidance or Pre-Construction Surveys. If Project-related vegetation removal and ground-clearing activities, or other activities that could disturb nesting birds, are scheduled between February 1 and September 15, then pre-construction surveys shall be conducted by a qualified biologist within 7 days prior to the start of construction in potential bird nesting habitat within 500 feet of the Project area to identify raptor and passerine nest sites. If an active raptor or passerine bird nest is identified, an appropriate species-specific nest protection buffer shall be identified by a qualified biologist based on PG&E's Nesting Bird Management Plan (NBMP) and site-specific conditions. A pre-construction nesting survey report shall be prepared and submitted to CDFW and CSLC within 1 week of pre-construction surveys, that outlines the surveys conducted, any nest locations identified, and recommended nest protection buffers. If standard buffers outlined in PG&E's NBMP cannot be followed or CDFW requests a larger buffer distance for any special-status species, the PG&E Biologist shall coordinate with CDFW on work that must occur including a description of the species, nest status, location, timing and duration of disturbance, and nature of the disturbance to determine the buffer distance. The buffer distance shall be clearly marked with high visibility flagging or other material and Project activities shall avoid the buffer zone. A CSLC-approved Biologist, in consultation with the PG&E Biologist, shall be present to monitor work occurring within proximity of active nests to assess the effects of work on nesting birds, determine and implement additional avoidance measures, or provide recommendations to postpone work. In the event work activities must be postponed due to nesting birds or if there is a lapse in construction of more than 7 days, another focused survey is required before Project activities can be reinitiated.

Location: All Project areas
Monitoring/Reporting Action: Submit pre-construction survey report to CSLC and CDFW prior to vegetation removal or ground disturbance during the nesting bird season, submit proposed buffers to CDFW for review if needed, and observation reports.
Effectiveness Criteria: Compliance with buffers
Responsible Party: PG&E and contractors
Timing: Before and during Phases 1 and 2 for Project activities conducted between February 1 and September 15

Potential Impact: Biological Resources – Impacts on California black rail

MM BIO-3: California Black Rail Nesting Season Avoidance or Pre-Construction Surveys. If Project activities are scheduled between February 1 and August 15, a qualified biologist, approved by CSLC, shall conduct a breeding season survey to identify nesting locations of California black rail. Surveys shall be conducted between February 1 and August 1, in accordance with CDFW protocols. If active California black rail nests are identified near the Project area, a nest protection buffer shall be recommended based on nest protection buffers outlined in PG&E's Nesting Bird Management Plan (NBMP) and site-specific conditions, and the following shall be required:

- Apply a nest protection buffer with a minimum distance of 300 to 600 feet from an active nest and postpone Project activities within the nest protection buffer until after August 15. The nest protection buffer may be reduced in coordination with CDFW if existing site conditions and disturbance levels indicate a reduced buffer would still be effective. PG&E shall provide results of the coordination to CSLC.
- If it is not possible to postpone Project activities within the minimum nest protection buffer, construction activities may proceed with CDFW approval and monitoring by a CSLC-approved qualified biologist. Additional measures such as visual screening may also be used to further reduce potential impacts to nesting black rail.

Location: All Project areas
Monitoring/Reporting Action: Conduct breeding season surveys; monitor nest sites and buffers during active Project activities
Effectiveness Criteria: Compliance with buffers and installation of visual screen, if needed
Responsible Party: PG&E and contractors
Timing: During and throughout Phases 1 and 2 for Project activities conducted between February 1 and September 15

Potential Impact: Biological Resources – Impacts on salt marsh harvest mouse

MM BIO-4: Salt Marsh Harvest Mouse Avoidance and Surveys (PG&E Marsh Hot Zone 8). For activities that will result in ground disturbance in tidal marsh or coastal wetland habitat, including the removal of marsh vegetation, a qualified CSLC-approved biologist shall flag access routes for crews when working in pickleweed (*Salicornia*) or smooth cordgrass (*Spartina alterniflora*) dominated habitats in order to minimize impacts on these species. Crews shall hand-carry

equipment and use protection mats (landing pads, pallets) to minimize ground disturbance when working within pickleweed or smooth cordgrass. Small areas of healthy vegetation shall be cleared by hand prior to placement of protective mats. To avoid take of salt marsh harvest mouse, the CSLC-approved biologist shall assess the site to determine if: vegetation protection mats are appropriate, vegetation removal by hand is needed, and an onsite biological monitor is needed. Prior to placement of mats or removal of vegetation, the vegetation shall be disturbed (i.e., flushed) to force movement of salt marsh harvest mouse into adjacent tidal marsh areas. Immediately following flushing, the field crew shall place a mat or manually remove vegetation with nonmotorized tools (e.g., hoe, rake, trowel, or shovel) to the bare ground.

Location: Pickleweed habitat in Project area (i.e., PG&E Marsh Hot Zone 8)
Monitoring/Reporting Action: Survey prior to disturbance within salt marsh habitat and monitor vegetation removal, if needed.
Effectiveness Criteria: Flushing of salt marsh harvest mouse; no salt marsh harvest mouse mortality
Responsible Party: PG&E and contractors
Timing: Before and during Phases 1 and 2 vegetation removal Project activities in salt marsh habitat in Project area

Potential Impact: Biological Resources – Impacts on salt marsh harvest mouse

MM BIO-5: Salt Marsh Harvest Mouse Exclusion Fencing. Prior to ground disturbance within salt marsh habitat, PG&E or its contractors shall install a mouse proof exclusion barrier which shall be placed around the edge of area of removed vegetation. The fence shall be made of a smooth material that does not allow the salt marsh harvest mouse to climb or pass through and the bottom shall be buried to a depth of at least 4 inches so that mice cannot crawl under the fence. The height of the fence should be at least 12 inches higher than the surrounding vegetation with a maximum heigh of 4 feet. A 2-foot-wide de-vegetated buffer shall be created along the habitat side of the fence. Installation of the fence shall be monitored by a CSLC-qualified biologist with experience with this species, who will check the fence alignment before vegetation clearing and fence installation to ensure no special-status species are present. A qualified biologist or biological monitor shall inspect the exclusion fencing daily to ensure there are no gaps, tears, or damage, and conduct maintenance as needed. Any mice found along or outside of the fence shall be closely monitored until they move away from the work area.

Location: Pickleweed habitat in Project area (i.e., PG&E Marsh Hot Zone 8)
Monitoring/Reporting Action: Survey prior to fence installation within salt marsh habitat and monitor vegetation removal, if needed. Daily fence inspections and maintenance, as needed.
Effectiveness Criteria: Exclusion of salt marsh harvest mouse from work area; no salt marsh harvest mouse mortality
Responsible Party: PG&E and contractors
Timing: Before and during Phases 1 and 2 throughout vegetation removal Project activities in salt marsh habitat in Project area

Potential Impact: Biological Resources – Impacts on western pond turtle

MM BIO-6: Western Pond Turtle Pre-Construction Surveys. A qualified biologist, approved by CSLC, shall conduct pre-construction surveys for western pond turtle (WPT) within 48 hours prior to ground disturbance to ensure that individuals are not present in the work area. Wildlife exclusion fencing, excavation covers, or escape ramps shall be used to prevent wildlife entrapment in excavation areas and shall be installed at the direction of the qualified biologist. A qualified biological monitor shall be present to monitor Project activities during all in-water work and initial ground disturbance that has the potential to impact special-status species. Should western pond turtle be found within the work areas, a qualified biologist shall relocate the species outside of work area barriers.

Location: All Project areas
Effectiveness Criteria: Barrier fencing in place if needed, WPT relocated as needed, no WPT mortality
Responsible Party: PG&E and contractors
Timing: Before and during Phase 1 and Phase 2 work on or adjacent to wetlands and aquatic habitats

Potential Impact: Biological Resources – Impacts on special status wildlife and plant species

MM BIO-7: Environmental Training Program. An environmental training program shall be developed and presented by a qualified biologist, approved by CSLC. All contractors and employees involved with the Project shall be required to attend the training program prior to work on the Project. At a minimum, the program shall cover special-status species that could occur on the site, their distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and required Project avoidance, minimization, and mitigation measures.

Location: All Project areas
Monitoring/Reporting Action: Signatures of trained employees for compliance
Effectiveness Criteria: All construction workers complete the program, special-status species avoidance
Responsible Party: PG&E and contractors
Timing: Before and during Phase 1 and 2 Project activities

Potential Impact: Biological Resources – Impacts on special status wildlife and plant species

MM BIO-8: Biological Monitoring. A qualified biological monitor, approved by CSLC staff, shall survey the onshore work area for special-status species or other wildlife that may be present no more than 24 hours prior to the commencement of Project activities. In addition, the biological monitor shall monitor Project activities within surface water and sensitive habitats, and other activities that have the potential to impact special-status species on a daily basis once Project activity begins. If at any time during Project activities any special-status wildlife species are observed within the Project area, work around the animal's immediate area shall be stopped or work shall be redirected to an area within the Project area that would not impact these species until the animal is relocated by a qualified biologist. Listed species would be allowed to leave of their own volition. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is injured or killed by Project-related activities, the biological monitor would stop work and notify CSLC and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area.

Location: All Project areas
Monitoring/Reporting Action: Observation reports
Effectiveness Criteria: Special-status species avoidance; no special status species mortality
Responsible Party: PG&E and contractors
Timing: Before and during Phase 1 and Phase 2 Project activities

Potential Impact: Biological Resources – Impacts on rare plant species along Napa riverbank

MM BIO-9: Pre-Construction Rare Plant Surveys and Restoration. Prior to the start of construction, a qualified CSLC-approved biologist shall conduct a pre-construction survey of the Project impact areas associated with Segment 2 within suitable habitat on the banks of the Napa River during the appropriate

blooming windows to determine whether special-status plants are present and to document the current baseline conditions prior to the start of construction. If a special-status plant population is found, it shall be flagged and mapped by the biologist for avoidance during decommissioning activities, if feasible. If ~~temporary impacts~~ Project activities cannot ~~be avoided, a Site Restoration Plan~~ ensure full avoidance of the observed special status species, then PG&E shall consult with and obtain written approval from CDFW, which shall be submitted to CSLC ~~and approved~~ prior to disturbance of the riverbank area. ~~The Site Restoration plan, as described in **MM BIO-11**, shall~~ Required actions may include, ~~methods for salvaging~~ but are not limited to, topsoil salvage, transplanting, seed collection, stockpiling, ~~and~~ replacing topsoil on top of backfilled excavation areas, or habitat compensation and shall ensure restoration of temporarily or permanently impacted special-status plant species to pre-construction conditions. ~~The Site Restoration Plan shall establish monitoring and performance criteria for restoration areas to ensure restoration of temporary impact areas to pre-Project conditions.~~

Location: All Project areas
Monitoring/Reporting Action: Pre-construction surveys and reports, written confirmation of CDFW approval with any associated requirements, as needed.
Effectiveness Criteria: Special-status species avoidance and restoration
Responsible Party: PG&E and contractors
Timing: Before Phase 2 Project activities

Potential Impact: Biological Resources – Impacts on special-status fish and aquatic species in the Napa River

MM BIO-10: Turbidity Monitoring Plan. PG&E shall implement a Turbidity Monitoring Plan during all in-water work to ensure that turbidity levels upstream and downstream of the Project area are compliant with regulatory requirements. A CSLC-approved environmental monitor shall be present during in-water work to monitor turbidity levels upstream and downstream of in-water work activities. If the results of the turbidity monitoring detect a Project-related increase in turbidity that exceeds the allowable thresholds for increased turbidity, as defined by regulatory permits, corrective measures shall be implemented. Corrective measures may include the use of a turbidity curtain or other sediment control devices, alteration to the timing and duration of in-water work and excavation, or minor modifications in methodology that result in a reduction of in-water excavation.

Location: Napa River
Monitoring/Reporting Action: Submit plan to CSLC for review and approval at least 30 days prior to in-river work, and monitoring results
Effectiveness Criteria: Minimized turbidity, no associated special-status fish and aquatic species injury or mortality
Responsible Party: PG&E and contractors
Timing: Phase 2, prior to the start of and throughout in-water work

Potential Impact: Biological Resources – Impacts on wetlands and riparian habitats

MM BIO-11: Site Restoration Plan. A Site Restoration Plan shall be developed that shall include the replacement of vegetation removed for completion of the Project. The Site Restoration Plan shall include methods for ~~salvaging~~ topsoil salvage, transplanting, seed collection, stockpiling, and replacing topsoil on top of backfilled excavation areas. The Site Restoration Plan shall establish monitoring and performance criteria for restoration areas to ensure restoration of temporary impact areas to pre-Project conditions. The Site Restoration Plan shall be submitted to the CDFW and CSLC for approval 30 days prior to the start of construction.

Location: All Project areas
Monitoring/Reporting Action: Submit Site Restoration Plan to CDFW and CSLC for review and approval at least 30 days prior to construction
Effectiveness Criteria: Restoration of disturbed wetland habitats
Responsible Party: PG&E and contractors
Timing: Prior to the start and at the completion of Project activities

Other applicable MMs for potential impacts on biological resources

MM HAZ-1: Project Work and Safety Plan. (see Hazards and Hazardous Materials)

MM HAZ-3: Inadvertent Release Contingency Plan. (see Hazards and Hazardous Materials)

MM HYDRO-1: Stormwater Pollution Prevention Plan (see Hydrology and Water Quality)

1.4.4 CULTURAL/TRIBAL CULTURAL RESOURCES

Potential Impact: Cultural Resources – Ground disturbance or damage to sensitive cultural resources

MM CUL-1/TCR-1: Sensitive Resource Area Exclusion Zone. Prior to Project implementation and for the duration of both Project phases, PG&E shall establish Exclusion Zones by installing a barrier in the Project area boundary cordoning two Sensitive Resource Areas: 1) P-28-000001 and 2) the Homestead Site. Construction equipment and personnel are not permitted to enter these Exclusion Zones. The Exclusion Zone shall be installed under the direction of the PG&E Cultural Resource Specialist (CRS), or their designated on-site archaeologist. All segments of the protective barrier will be removed and reinstalled between Project phases.

Location: Project areas on east side of Napa River
Monitoring/Reporting Action: Monitor installation of exclusion zone fencing
Effectiveness Criteria: No disturbance in Sensitive Resource Area
Responsible Party: PG&E and contractors
Timing: Before Phase 1 and Phase 2 Project activities

Potential Impact: Cultural Resources – Ground disturbance or damage to sensitive cultural resources

MM CUL-2: Cultural Resources Monitoring. The PG&E CRS, or their designated on-site archaeologist, shall provide spot monitoring during ground disturbing Project activities.

Location: All ground disturbances in Project area
Monitoring/Reporting Action: Monitor ground disturbance
Effectiveness Criteria: No disturbance or damage to sensitive resources
Responsible Party: PG&E and contractors
Timing: During Phase 1 and Phase 2 Project activities

Potential Impact: Cultural Resources – Ground disturbance or incidental damage to cultural and archaeological resources

MM CUL-3/TCR-3: Cultural and Tribal Cultural Resources Awareness Training. Prior to Project implementation, a consultant and construction-worker cultural and tribal cultural resources awareness training program for all personnel involved in Project implementation shall be conducted by the Project archaeologist and

Tribal Representative(s) and must be provided to all Project employees, contractors, subcontractors, and other workers prior to their involvement in any ground-disturbing activities, with subsequent training sessions to accommodate new personnel becoming involved in the Project. Evidence of compliance with this mitigation measure shall be documented within pre-Project compliance documentation materials and submitted to CSLC prior to Phase 1 and Phase 2 mobilizations.

The purpose of the training will be to educate on-site construction personnel as to the sensitivity for resources in the Project area, including understanding the difference between non-Native archaeological resources (cultural resources) and resources that are Native American in nature (tribal cultural resources). The training shall also cover the possibility of exposing cultural or tribal cultural resources, guidance on recognizing such resources, and direction on procedures if a potential resource is encountered. PG&E or the on-site archaeologist completing the training will instruct all Project personnel that touching, collecting, or removing cultural materials from the property is strictly prohibited and is illegal. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any find of significance including what may be Native American in origin, consistent with Native American tribal values and customs.

The training shall include, at a minimum:

- A brief overview of the cultural sensitivity of the Project site and surrounding area;
- What resources could potentially be identified during ground disturbance;
- The protocols that apply in the event unanticipated cultural or tribal cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated;
- Consequences in the event of noncompliance; and,
- Safety procedures when working with monitors.

Location: All Project areas
Monitoring/Reporting Action: Provide list of training attendees to CSLC
Effectiveness Criteria: No disturbance or incidental damage to sensitive cultural resources
Responsible Party: PG&E and contractors

Timing: Before starting Project activities

Potential Impact: Cultural Resources – Impacts to archaeological sites, and/or historic, cultural, or tribal resources

MM CUL-4/TCR-4: Discovery of Previously Unknown Cultural or Tribal Cultural Resources. If any potential tribal cultural resources, archaeological resources, other cultural resources are discovered by the designated on-site archaeologist, or other Project personnel during construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work stoppage shall remain in place until the PG&E Cultural Resource Specialist (CRS) and the designated on-site archaeologist have jointly determined the nature of the discovery, and the significance of the discovery has been determined by the on-site archaeologist and PG&E CRS and the designated tribal representative who will be invited to the to the project area if finds are Native American in origin. Said Tribal Representative shall be asked to continue to monitor should the discovery be Native American in origin and to be significant (for tribal cultural resources). Resources that are Native American on origin shall neither be photographed nor be subjected to any studies beyond such inspection as may be necessary to determine the nature and significance of the discovery. If the discovery is confirmed as a significant cultural resource or a significant tribal cultural resource, an Exclusion Zone will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities will be permitted within the Exclusion Zone until the area has been cleared for construction by the PG&E CRS, the designated on-site archeologist, and if appropriate, the Tribal Representative. The exact location of the resources within the Exclusion Zone must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism.

Impacts to previously unknown significant cultural and tribal cultural resources shall be avoided through preservation in place if feasible. If the designated on-site archaeologist or Tribal Representative/Monitor, as appropriate, determines that damaging effects on the cultural or tribal cultural resource can be avoided in place, then work in the area may resume provided the area of the discovery remains clearly marked for no access/disturbance. Title to all archaeological sites, historic or cultural resources, and tribal cultural resources on or in the tide and submerged lands of California is vested in the State and under CSLC jurisdiction. The final disposition of archaeological, historical, and tribal cultural

resources recovered on State lands under CSLC jurisdiction must be approved by CSLC.

If cultural resources are encountered during construction activities, PG&E and/or its designated on-site archaeologist shall halt work in the immediate vicinity of the find. The find shall be evaluated by a qualified archaeologist in tandem with the Tribal Representative, if appropriate and if the find is Native American in origin, before construction activity may resume. If the qualified archaeologist and tribal representative determines that the find may be significant and if avoidance of the find is determined to be infeasible, the archaeologist shall notify the lead agencies and shall implement data recovery and treatment/mitigation of unanticipated discoveries in consultation with the lead agency. PG&E shall be responsible for the resultant mitigation costs as well as associated curation costs if reburial on site is not acceptable to the landowner. If the find is determined to be insignificant no management measures are required and construction may commence once given approval by the on-site archaeologist. All significant findings will be documented in a summary report that will be provided to pertinent consulting parties within a year of project completion. Said report shall be submitted to the California Historic Resources Inventory System.

Location: All Project areas
Monitoring/Reporting Action: Monitor ground disturbance and establish exclusion zone
Effectiveness Criteria: No disturbance or incidental damage to sensitive cultural resources and compliance with the CRMTP
Responsible Party: PG&E and contractors
Timing: During Phase 1 and Phase 2 construction activities

Potential Impact: Cultural Resources – Impacts to human remains

MM CUL-5/TCR-5: Unanticipated Discovery of Human Remains. If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash or other remnants of burning ceremonies) are encountered, all ground disturbing activities shall halt within 100 feet of the discovery or other agreed upon distance based on the project area and nature of the find; the remains will be treated with respect and dignity and in keeping with all applicable laws including California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98. If representatives are not already on site when a discovery is made, the PG&E CRS or their designated on-site archeologist,

Tribal Representative(s), PG&E, and CSLC shall be notified immediately. The PG&E CRS shall contact the County Coroner within 24 hours. If human remains are determined by the County Coroner to be of Native American origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of this determination, and the NAHC shall identify a Most Likely Descendent (MLD). No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented. Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq.

If human remains are encountered during construction or project-related activities, PG&E will follow the requisite legal provisions provided above. If the human remains are Native American in origin, upon the NAHC establishing the MLD, PG&E will work with the MLD/MLD's representative to discern an appropriate means of treatment for the remains and associated artifacts (if any are present). If avoidance of the find is determined to be infeasible, the archaeologist shall notify the lead agencies and shall implement data recovery and treatment/mitigation consultation with the lead agency and Tribal Representative. PG&E shall be responsible for the resultant mitigation costs as well as associated curation costs if reburial on site (or other agreed-upon location) is not acceptable to the landowner. All significant findings will be documented in a summary report that will be provided to pertinent consulting parties within a year of project completion. Said report shall be submitted to the California Historic Resources Inventory System.

Location: All Project areas
Monitoring/Reporting Action: Notifications/Consultations with County Coroner and NAHC (if applicable), copy to CSLC
Effectiveness Criteria: Reduced impacts to human remains (if found)
Responsible Party: PG&E and contractors
Timing: During Phases 1 and 2 construction activities

1.4.5 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

Applicable mitigation measures for potential impacts to geology, soils, and paleontological resources

MM BIO-11: Site Restoration Plan (see Biological Resources)

MM HYDRO-1: Stormwater Pollution Prevention Plan (see Hydrology and Water Quality)

1.4.6 HAZARDS AND HAZARDOUS MATERIALS

Potential Impact: Hazards and Hazardous Materials – Impacts from horizontal directional drilling (HDD) activities

MM HAZ-1: Project Work and Safety Plan. A Project Work and Safety Plan (PWSP) shall be submitted to CSLC staff and all other pertinent agencies for review and approval at least 30 days prior to the implementation of each Project Phase. The PWSP shall include the following information (at a minimum):

- Contact information
- Hazardous Spill Response and Contingency Plan
- Emergency Action Plan
- Summary of the Project Execution Plan
- Project Management Plan, including testing and proper disposal of used HDD fluids and drill cuttings
- Site Safety Plan, including Material Data and Safety Sheets (MSDS) and measures for proper handling of hazardous materials including, but not limited to, soils containing residual pesticides
- Permit Condition Compliance Matrix

Location: All Project areas
Monitoring/Reporting Action: CSLC review and approval of PWSP 30 days prior to Phase 1 implementation, CSLC approved monitor to ensure compliance.
Effectiveness Criteria: Reduced risks of water and soil contamination
Responsible Party: PG&E, contractors, and CSLC
Timing: During Phases 1 and 2 construction activities

Potential Impact: Hazards and Hazardous Materials – Impacts from asbestos

MM HAZ-2: Asbestos Handling Procedures. Construction personnel shall be informed of the potential presence of asbestos-containing material (ACM) at the Project site prior to their assignment. After exposing the existing pipeline for removal, and prior to the start of cutting and tie-in activities, a certified asbestos inspector/consultant shall test whether the coating consists of ACM greater than

1 percent by weight. If testing reveals the coating contains ACM less than 1 percent by weight, the pipeline segment shall be treated as normal construction waste and no additional measures are required. If testing reveals the coating contains ACM greater than 1 percent by weight, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the BAAQMD asbestos notification system and in accordance with applicable worker safety regulations. All ACM removed from the pipeline segment shall be labeled, transported, and disposed of at a verified and approved ACM disposal facility.

Location: All Project areas
Monitoring/Reporting Action: Inspections and testing (if necessary) for asbestos. Lab report results to CSLC, with abatement plan if required.
Effectiveness Criteria: Proper containment of ACM
Responsible Party: PG&E and contractors
Timing: During all Phase 1 tie-in activities and Phase 2 pipeline removal and tie-in activities

Potential Impact: Hazards and Hazardous Materials – Impacts from drilling fluids to terrestrial, wetland, or riverine habitats

MM HAZ-3: Inadvertent Release Contingency Plan. An Inadvertent Release Contingency Plan shall be prepared and implemented to detect and address any inadvertent drilling fluid migration outside of the HDD borehole, including potential drilling fluid migration into the River. At least 30 days prior to Phase 1 implementation, PG&E shall submit a Final Inadvertent Release Contingency Plan to CSLC for review and approval.

Location: All HDD Project areas
Monitoring/Reporting Action: Submit Inadvertent Release Contingency Plan to CSLC for review and approval, monitoring during HDD activities
Effectiveness Criteria: Mitigation of drilling fluid migration (if occurs)
Responsible Party: PG&E and HDD drilling contractor
Timing: 30 days before and during Phase 1 HDD drilling activities

Potential Impact: Hazards and Hazardous Materials – Impacts on existing pipelines and utilities in the Napa riverbed

MM HAZ-4: Pre- and Post-Project Bathymetric and Surficial Features Multi-Beam Debris Survey. Pre- and post-Project Bathymetric and Surficial Features Multi-Beam Debris Surveys of the riverbed shall be conducted using a vessel

equipped with a multi-beam sonar system. The pre-Project survey, with previously collected data, shall serve to fully identify pre-Project bottom contours, debris, and any exposed utilities, and a copy of the survey shall be submitted to CSLC staff for review 30 days prior to Project implementation. A post-Project Bathymetric and Surficial Features Multi-Beam debris survey shall also be performed, and the results compared to the initial baseline survey. Any anomalous objects located in the survey would be positively identified by divers and any remaining objects related to the decommissioning would be removed. A Project close-out report with drawings and coordinates of any facilities abandoned in place would be submitted to CSLC within 60 days of work completion.

Location: Napa River Project areas
Monitoring/Reporting Action: Pre-Project and post-Project geophysical debris survey results submitted to CSLC
Effectiveness Criteria: Avoidance of pipelines, utilities, and debris as well as removal of all Project-related debris
Responsible Party: PG&E and contractors
Timing: Before Phase 2 Project activities and after Project completion

Potential Impact: Hazards and Hazardous Materials – Impacts to the Napa County Airport

MM HAZ-5: Notifications to Airport Regulatory Agencies Prior to Initiation of Work Activities. In accordance with 14 CFR Part 77, FAA form 7460-1 a "Notice of Proposed Construction or Alteration" must be completed, if the conditions listed at § 77.9 are applicable, and submitted 60 days before Project initiation for review and Project clearance. The form should be submitted to the Western-Pacific Regional Airports Division, San Francisco Airports District Office (ADO). Additionally, notification to the Napa County Airport manager must be provided at (707) 253-4665 at least 60 days before Project implementation.

Location: All Project areas
Monitoring/Reporting Action: submit notice to San Francisco ADO and Napa County Airport manager
Effectiveness Criteria: Avoidance of impacts to the Napa County Airport
Responsible Party: PG&E and contractors
Timing: 60 days before Phase 1 and Phase 2 Project activities

Other applicable MMs for potential impacts from Hazardous and Hazardous Materials

MM AES-1: Glare Minimization (see Aesthetics)

MM TRA-1: Traffic Control Plan (see Transportation)

1.4.7 HYDROLOGY AND WATER QUALITY

Potential Impact: Hydrology and Water Quality – Impacts on hydrology and water quality

MM HYDRO-1: Stormwater Pollution Prevention Plan. PG&E or their contractor shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with the Statewide NPDES Construction General Permit (Order No. 2012-0006-DWQ). At a minimum, the SWPPP shall include measures for:

- Maintaining adequate soil moisture to prevent excessive fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water.
- Installing fiber rolls and sediment basins to capture and remove particles that have already been dislodged.
- Establishing good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials, and waste management BMPs, including procedural and structural measures to prevent the release of wastes and materials used at the site.

The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill. The SWPPP shall be provided to CSLC staff for review a minimum of 30 days prior to Project implementation.

Location: All Project areas
Monitoring/Reporting Action: SWPPP submitted to CSLC, observation reports
Effectiveness Criteria: Minimize erosion, siltation, and turbidity
Responsible Party: PG&E and contractors
Timing: During all Phase 1 and Phase 2 Project activities

Other applicable MMs for potential impacts to Hydrology and Water Quality

MM BIO-10: Turbidity Monitoring Plan (see Biological Resources)

MM BIO-11: Site Restoration Plan (see Biological Resources)

MM HAZ-3: Inadvertent Release Contingency Plan (see Hazards and Hazardous Materials)

1.4.8 LAND USE AND PLANNING

Potential Impact: Land Use and Planning – Impacts to the Napa County Airport Master Plan

MM HAZ-5: Notifications to Airport Regulatory Agencies Prior to Initiation of Work Activities (see Hazards and Hazardous Materials)

1.4.9 NOISE

Potential Impact: Noise – Impacts on sensitive receptors

MM NOI-1: Work Hours. Work involving noise-generating equipment shall be conducted during the hours of 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 4:00 p.m. on weekends or legal holidays. Work involving noise-generating equipment outside of the time-of-day work restrictions in the Napa city limits shall be prohibited unless PG&E receives permission in advance by city of Napa.

Location: Project areas within Napa city limits
Monitoring/Reporting Action: Permit/approval from city of Napa
Effectiveness Criteria: Reduction noise disturbance to residents
Timing: During Phase 1

1.4.10 RECREATION

Potential Impact: Recreation – Impacts on recreation in the Napa River

MM REC-1: Riverine Safety Measures. Prior to in-water activity, PG&E or its designated contractor shall post information at all local marinas and launch facilities concerning Project work locations, times, and other details of activities that may pose hazards to recreational boaters. Temporary warning signs and buoys shall be installed in a manner that does not interfere with navigation

upstream and downstream of the work site when in-water activities are occurring, to provide notice to the public that Project activities are taking place and to exercise caution.

Location: Napa River Project areas
Monitoring/Reporting Action: Documentation of compliance
Effectiveness Criteria: Reduction of potential impact to recreational vessels
Responsible Party: PG&E and contractors
Timing: Before the vessel departure to Project area for Phase 2 and during all in-water activities

Potential Impact: Recreation – Impacts on recreational activities

MM REC-2: Local Notice to Mariners. PG&E or its marine contractor should prepare a Local Notice to Mariners which describes all in-water activities to be submitted to the U.S. Coast Guard at least 15 days prior to Phase 2 activities. The Notice shall include:

- Type of operation (i.e., dredging, diving operations, construction).
- Location of operation, including latitude and longitude and geographical position, if applicable.
- Duration of operation, including start and completion dates (if these dates change, the U.S. Coast Guard needs to be notified).
- Vessels involved in the operation.
- VHF-FM radio frequencies monitored by vessels on the scene.
- Point of contact and 24-hour phone number.
- Chart Number for the area of operation.

Locations: Napa River Project areas
Monitoring/Reporting Action: Publication of notice
Effectiveness Criteria: Reduction of potential impact to recreational vessels
Responsible Party: PG&E and contractors
Timing: Phase 2, at least 15 days prior to vessel departure to Project area

1.4.11 TRANSPORTATION

Potential Impact: Transportation – Traffic and emergency vehicle access

MM TRA-1: Traffic Control Plan. Prior to commencement of Project activities, a Traffic Control Plan shall be submitted to CSLC for review and approval. It shall include measures such as appropriate signage, detour routes, and lane closure to reduce potential hazards to motorists and workers during the Project. In addition, the Traffic Control Plan shall address measures to allow emergency vehicle access, and reduction of impacts to circulation, potential hazards to motorists, bicyclists, pedestrians, and workers during the Project.

Locations: All Project areas
Monitoring/Reporting Action: Documentation within compliance monitoring sheets
Effectiveness Criteria: Minimized risks with associated traffic congestion and public and emergency vehicle conflicts.
Responsible Party: PG&E and contractors
Timing: Before Phase 1 and Phase 2 Project activities

1.4.12 LIST OF ABBREVIATIONS AND ACRONYMS

ACM = asbestos-containing material
ADO = Airports District Office
AES = Aesthetics
AQ = Air Quality
BAAQMD = Bay Area Air Quality Management District
BIO = Biological
BMP = best management practice
CDFW = California Department of Fish and Wildlife
CEQA = California Environmental Quality Act
CRS = Cultural Resource Specialist
CSLC = California State Lands Commission
CUL = Cultural
FAA = Federal Aviation Administration
HAZ = Hazardous
HDD = horizontal directional drilling
HYDRO = Hydrology and Water Quality
MMP = Mitigation Monitoring Program
MM = mitigation measure
mph = miles per hour

NAHC = Native American Heritage Commission
NPDES = National Pollutant Discharge Elimination System
NWIC = Northwest Information Center
NOI = Noise
NOx = Nitrous Oxides
PG&E = Pacific Gas and Electric Company
PWSP = Project Work and Safety Plan
REC = Recreation
SMHM = Salt Marsh Harvest Mouse
SWPPP = Stormwater Pollution Prevention Plan
TCR = Tribal Cultural Resources
TRA = Transportation
USCG = U.S. Coast Guard
USFWS = U.S. Fish and Wildlife Service
WPT = Western Pond Turtle